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DEVELOPMENT OF THE EAST GERMAN IRON AND STEEL INDUSTRY
UNDER THE FIVE-YEAR PLAN

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INTRODUCTION

On 17 August 1950 the government of the German Democratic Republic issued a decree outlining the development of the iron and steel industry under the Five-Year Plan. It has been possible to obtain a photostatic copy of a draft for this decree prepared by the Main Department for Metallurgy in the Ministry for Industry. The draft is interesting because it contains numerical data not included in the decree itself. This data has been summarized below, together with data from another document giving all details on the development of pig-iron production, raw steel production, and rolling mill activities.

I. DEVELOPMENT OF PRODUCTION AS A WHOLE
(in million tons)

	<u>1936</u>	<u>1950</u>	<u>1955</u>
Iron ore	0.6	0.4	1.6
Pig iron	0.2	0.395	1.3
Raw ingot steel	1.2	0.95	3.1*
Rolling mill products (including semifinished products for forging)	1	0.8	2.2*

*including production of Soviet Corporations (SAG)

II. COVERING MATERIAL REQUIREMENTS OF THE ZONE

1. In 1950, the Soviet Zone requirements of rolling mill products were 1,500,000 tons, 53 percent of which were covered from domestic production. In 1955, requirements are planned at 3,500,000 tons, 63 percent of which are to be covered from domestic production.

2. Scrap requirements for the production of raw steel are to increase from 1,300,000 tons in 1950 to 2,800,000 tons in 1955.

3. Essential requirements to be covered by imports (in tons):

	<u>1950</u>	<u>1955</u>
Pig iron for production of steel	250,000	700,000
Iron ore	--	1,400,000
Metallurgical coke	400,000	1,300,000

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III. INVESTMENT PLAN (in million Deutsche marks)

	1950 Plan	Supple- mentary Funds 1950*	1951	1952	1953	1954	1955	Total**
Iron-ore mines	2.1	1.7	12	8	5	3	2	32
"West" Combine (Calbe)	--	2.2	20	22	15	15	1	75
"Ost" Combine (Fuerstenberg)	--	2	59	197	161	42	17	478
Maxhuetten	17.7	0.4	26	25	16	6	2	75
Riesa	42	--	43	35	24	7	2	111
Groeditz	44	--	32	21	28	15	1.5	97
Hennigsdorf	24.5	0.5	24	12	3	2	7	49
Doehlen	0.5	3.0	48	49	15	8	2	125
Brandenburg	16.3	25.5	112	23	23	17	7	207
Miscellaneous (mainly rolling mills)	21	0.1	27	21	15	10	7	80
Total for iron and steel industry	168	35	402	412	306	123	50	1,330

*Supplementary credits allotted at the end of summer 1950 for preparations for the Five-Year Plan.

**Not including the regular investment plan for 1950.

IV. MANPOWER IN THE IRON AND STEEL INDUSTRY

	1950	1955
Mines	800	3,500
"West" Combine	--	2,400
"Ost" Combine	--	12,000
Maxhuetten	6,300	8,600
Riesa	6,100	9,900
Groeditz	2,200	4,000
Doehlen	1,300	3,600

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	<u>1950</u>	<u>1955</u>
Hennigsdorf	4,000	5,500
Brandenburg	700	13,000
Miscellaneous plants	6,600	5,900
Total	28,000	68,000

In addition, the Hennigsdorf Iron Research Institute, which employed 21 persons in 1950, is to employ 120 persons in 1955, and the Central Construction Bureau of the Metallurgical Industry, which employed 70 persons in 1950, is to have 310 employees in 1955.

V. PRODUCTION PROGRAM OF THE PRINCIPAL ENTERPRISES

- | | |
|---|---|
| 1. Maxhuetten mines | } Iron ore and limestone |
| 2. Harz iron-ore mines | |
| 3. New iron-ore mines at
Sommerathenburg,
Bardleben, and
Braunesumpf | } Iron ore |
| 4. New mines at Tanger-
niederung | |
| 5. Schmalkalden mines | |
| 6. New "West" steel mills
(Calbe, Schoenebeck,
etc.) | Foundry pig iron |
| 7. New "Ost" Combine
near Fuerstenberg/
Oder | Pig iron for steel, raw steel (Siemens-Martin),
cast steel, graded iron, medium and thin
sheet, large forged pieces, etc. |
| 8. Maxhuetten | Thomas pig iron, Thomas steel and electric
steel, graded iron, medium and fine sheet,
forged pieces |
| 9. Riesa | Siemens-Martin steel and electrical steel,
cast steel, graded iron, pipes |
| 10. Groeditz | Siemens-Martin raw steel, cast steel, large
forged pieces, tires, cast-iron pipes |
| 11. Doehlen | Special steels (Siemens-Martin and electric),
cast steel, graded iron, forged pieces,
automobile springs |
| 12. Hennigsdorf | Siemens-Martin steel, electric steel, cast
steel, graded iron |
| 13. Brandenburg | Siemens-Martin raw steel, graded iron, sheet,
welded pipes |

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VI. DEVELOPMENT OF RAW STEEL PRODUCTION

To be able to produce the 2,200,000 tons of rolling mill products planned for 1955, it will be necessary to produce 3,160,000 tons of ingot steel (including 140,000 tons of ingots or rough castings for forging). This production is to be distributed as follows among the various steel mills:

Production by Principal Steel Mills
(in 1,000 tons)

<u>Steel Mill</u>	<u>1950</u>	<u>1955</u>	<u>Remarks on Plant Equipment</u>
"Ost" Combine	0	550	Steel mill is to have four 50-ton Siemens-Martin furnaces, three 20-ton Talbot furnaces, three 250-ton primary mixers
Brandenburg	40	700	Four 100-ton Siemens-Martin furnaces completed at the end of 1950; apparently six more are to be built subsequently
Maxhütte	256	460	In 1955, the blast furnaces are to produce Thomas pig iron exclusively. The Thomas steel mill is to be reconstructed (with a fifth converter) and will be able to produce 420,000 tons, in addition to which there will be 40,000 tons of steel coming from the electric furnaces
Riesa	300	600	At the end of 1950, there were six 100-ton Siemens-Martin furnaces, one 60-ton Siemens-Martin furnace, and one 25-ton Siemens-Martin furnace. Six new 60-ton furnaces are to be built later (Steel Mill No 2)
Groeditz	60	150	Six Siemens-Martin furnaces at the end of 1950: two 10-ton, one 20-ton, two 40-ton, and one 60-ton. Two 10-ton electric furnaces are to be built
Doehlen	12	250	Two 10-ton Siemens-Martin furnaces at the end of 1950. To be built: four 40-ton Siemens-Martin furnaces, one steel mill with an electric furnace having an annual capacity of 60,000 tons
Hennigsdorf	125	200	Four 80-ton Siemens-Martin furnaces at the end of 1950. To be built: one 25-ton Siemens-Martin furnace, one 10-ton electric furnace
Total for German enterprises	793	2,910	
Soviet Corporations	160	250	Increase due mainly to enlargement of the Thale steel mill
Total	953	3,160	

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VII. DEVELOPMENT OF ROLLING MILL EQUIPMENT

Blooming mills

Existing at the end of 1950: at Hennigsdorf, Maxhuetten, Riesa, Thale (SAG)
 To be built: at Brandenburg, "Ost" Combine, Doehlen

Mills for heavy and semifinished sections

Existing at the end of 1950: at Maxhuetten
 To be built: at Brandenburg, Combine "Ost," Doehlen

Medium iron [section?] mills

Existing at the end of 1950: at Riesa, Hennigsdorf
 To be built: at Doehlen

Small section mills

Existing at the end of 1950: at Riesa, Hennigsdorf, Kirchmoeser, Finow
 (Hoffmann & Notz) RAW (Reichsbahn Repair Yard) Dresden, Oberspree Cable
 Works (SAG)
 To be built: at Doehlen

Flatting mills

Existing at the end of 1950: Hennigsdorf, Hettstedt (SAG)
 To be built: at "Ost" Combine

Strip mills

Existing at the end of 1950: none
 To be built: at Brandenburg

Tire-rolling mills

Existing at the end of 1950: at Groeditz
 To be built: at Groeditz (second mill)

Plate mills

Existing at the end of 1950: at Kirchmoeser, Iisenburg, Hettstedt (SAG)
 To be built: at Brandenburg

Medium sheet mills

Existing at the end of 1950: at Iisenburg, Auerohammer, Aue, and Hettstedt
 (SAG)
 To be built: at "Ost" Combine, Brandenburg, and Maxhuetten

Thin sheet mills

Existing at the end of 1950: at Giberntau, Burg, Thale (SAG), Hettstedt
 (SAG)
 To be built: at "Ost" Combine, Brandenburg, Maxhuetten

Tube-rolling mills

Existing at the end of 1950: at Riesa
 To be built: at Riesa (second mill)

In addition, it is planned to mechanize all rolling mills now in existence,
 to permit an increase in output capacity.

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VIII. DEVELOPMENT OF CAST STEEL PRODUCTION
(in tons)

Type of Steel	1949	1950	1951	1952	1953	1954	1955
Electric cast steel	14,015	22,310	41,000	48,360	56,160	66,960	76,360
Siemens-Martin cast steel	12,980	20,750	34,800	38,800	47,800	71,600	84,600
Bessemer cast steel	11,066	17,380	16,320	18,400	19,500	16,540	16,740
Total	38,061	60,440	92,120	105,560	123,460	155,100	177,700

The 1951 production capacity is thus estimated at 92,120 tons, as compared with 60,440 tons in 1950 and 38,061 tons in 1949.

The development of production has been based on 1949 requirements. However, the requirements picture has changed considerably since that time, there has been a great reduction in heavy pieces cast from Siemens-Martin steel, and there has also been a reduction in hand-cast pieces in favor of pieces produced mechanically. For this reason, the electric furnaces have been overloaded (excess of 10,000 tons of orders for 1951), whereas the other steel mills have not been able to fulfill their 1950 plans because of a shortage of orders.

Since the total production capacity exceeds 173,000 tons (92,120 tons for German plants and 81,000 tons for Soviet Corporations in 1949, a figure which has since been exceeded), the total allocations for 1951 have been increased to 171,000 tons. Thus, the situation is attaining equilibrium. However, to judge by the experience of 1950, the majority of the offices receiving the allocations will be a long way from utilizing them fully. The Transportation Ministry, which requested an allocation of 1,500 tons, issued 250 tons of orders; the Main Department for Machine Building, which was entitled to an allocation of 2,000 tons from the Main Department for Metallurgy, ordered only 800 tons; etc. The allocations requested for 1951 appear to be even more inflated, and it thus appears that part of the 1951 capacity will not be utilized.

According to another source, experts in the Ministry of Industry believe that this available capacity will be used as a pretext to permit the Soviets to demand an increase in reparations. The following figures planned for 1951 production should be noted: Riesa, 2,000 tons of electric cast steel and 10,000 tons of Siemens-Martin cast steel; Hennigsdorf, 2,000 tons of electric cast steel and 6,000 tons of Siemens-Martin cast steel; Groeditz, 2,000 tons of electric cast steel; Doehlen, 6,000 tons of Siemens-Martin cast steel.)

IX. DEVELOPMENT OF PIG-IRON PRODUCTION
(in 1,000 tons)

Product	1950	1955	Remarks
Thomas pig iron	255	490	Production assured only by Maxhuetten
Foundry pig iron	65	250	Production by Maxhuetten; will be completely assured by "West" Combine in 1955
Spiegeleisen and pig iron for steel	15	560	Production assured by Maxhuetten in 1950; in 1955, 10,000 tons will be assured by Maxhuetten and 550,000 tons by "Ost" Combine

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Production of 490,000 tons of Thomas pig iron 420,000 tons of Thomas raw steel

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Production of Siemens-Martin steel is to reach 3,150,000 tons in 1955, including 2,600,000 tons in ingots and 550,000 in steel castings. Of this total, 610,000 tons are to be produced by "Ost" Combine, which will entail a requirement of 550,000 tons of pig iron, to be provided from the plant's own output. This will leave a balance of 2,540,000 tons of Siemens-Martin steel to be produced, for which 900,000 tons of pig iron will be needed (on a basis of 35 percent of the total product); this amount will have to be assured by imports.

X. REQUIREMENTS OF IRON ORE IN 1955

Imported ore: 1,200,000 tons for "Ost" Combine (52-54 percent iron content)

Production in East Germany: 1,600,000 tons for Maxhütte and "West" Combine, 900,000 tons of which will come from mines now in existence and 700,000 tons from mines to be exploited.

APPENDIX: METALLURGICAL PRODUCTION IN 1950

It has been possible to obtain a photostatic copy of a document giving the production of the metallurgical industry in East Germany during 1950. The principal figures have been incorporated in the following tables, which cover all enterprises under the Main Department for Metallurgy, that is, all metallurgical enterprises in the zone except the Soviet Corporations. Figures are in tons unless otherwise indicated.

Product	Production				Percent of Annual Plan (Quota: 92%)
	1950 Plan	Nov 1950	Oct, Nov 1950	1 Jan - 30 Nov 1950	
<u>Ore</u>					
Iron ore	370,000	33,430	64,258	357,865	96.7
Copper ore	840,000	76,300	143,600	732,300	87.2
Lead concentrate (tons of Pb)	1,363	169	327	1,313	96.3
Tin concentrate (kg of Sn)	173,000	15,338	31,130	162,406	93.9
Arsenic concentrate (kg of As)	80,000	7,600	15,940	77,117	96.4
Tungsten concentrate (kg of WO ₃)	40,800	5,251	9,683	53,842	132.0

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<u>Product</u>	<u>1950 Plan</u>	<u>Production</u>			<u>Percent of Annual Plan (Quota: 92%)</u>
		<u>Nov 1950</u>	<u>Oct, Nov 1950</u>	<u>1 Jan - 30 Nov 1950</u>	
Tungsten concentrate produced at Zschor- lau (1) (kg of WO ₃)	--	2,446	4,256	32,625	--
Sulfur pyrites /unit not specified	--	210	415	1,395	--
<u>Iron and Steel</u>					
Pig iron, total	335,000	27,576	53,812	307,861	91.9
Thomas pig iron	255,000	20,333	42,535	233,660	91.6
Foundry pig iron	65,000	6,530	9,621	59,487	91.5
Spiegeleisen	15,000	713	1,655	14,714	98.1
Raw ingot steel, total	793,000	85,916	167,784	732,334	92.4
Thomas steel	220,000	17,191	36,224	200,570	91.2
Siemens-Martin steel	533,000	64,706	123,111	490,918	91.9
Electric steel	40,000	4,019	8,449	40,846	102.1
Semifinished prod- ucts, ready for sale, total	204,000	18,241	40,349	201,857	101.0
For rolling mills not under Main Department for Metallurgy	157,000	11,861	32,030	164,416	104.7
For forges	47,000	6,380	8,319	43,441	92.4
Rolled steel, total	527,000	60,739	117,069	474,489 (2)	90.0
Graded rolled products	400,000	45,030	87,001	359,405	89.9
Sheet	99,000	12,708	24,615	90,146	91.0
Tires	15,000	1,760	3,121	15,231	101.5
Seamless pipe	13,000	1,241	2,332	3,707	74.7
Butt-welded pipe	16,000	1,354	2,808	14,710	91.9
Cold-rolled products	4,400	617	1,197	6,038	137.2

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<u>Product</u>	<u>1950 Plan</u>	<u>Production</u>		<u>1 Jan - 30 Nov 1950</u>	<u>Percent of Annual Plan (Quota: 92%)</u>
		<u>Nov 1950</u>	<u>Oct, Nov 1950</u>		
Rod-drawing products	12,000	2,149	4,004	14,524	121.0
Ferrolloys, total	19,500	2,327	5,342	23,933	122.7
Ferrosilicon	9,900	1,569	4,101	15,308	154.6
Ferromanganese	8,000	666	1,149	7,500	93.8
Ferrochrome	1,600	92	92	1,125	70.3
Cast steel rolls	2,000	278	635	2,175	108.8
Cast-iron pieces (3)	16,700	2,555	5,087	22,301	133.5
Cast steel pieces (3)	15,930	1,982	3,961	16,317	102.4
Forged and die-forged pieces	9,000	1,150	2,312	10,873	120.8
Metal constructions (3)	10,800	1,264	2,634	13,148	121.7
<u>Nonferrous Metals</u>					
Refined and electro- lytic copper	32,000	2,987	6,104	31,962 (4)	99.0
Lead	19,100	1,749	3,551	17,114 (5)	89.6
Zinc and zinc alloys	1,700	144	329	2,050	120.6
Tin	155	10	22	125	80.6
Nickel	80	207	18	84	105.0
Aluminum and aluminum alloys	6,200	810	1,736	9,355 (6)	150.9
Brass	1,350	295	630	1,615	119.6
Bronze	2,000	366	595	2,194	107.7
Lead-tin antifriction metal	250	20	54	221	88.4
Nonferrous rolled products	14,963	1,218	2,364	12,780	85.4
Nonferrous castings (7)	1,000	172.6	365.2	1,889.5	189.0
Sulfuric acid (tons of SO ₃)	27,000	1,940	3,907	21,113	78.2
Copper sulfate	4,000	480	935	5,026	125.7

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<u>Product</u>	<u>1950 Plan</u>	<u>Production</u>		<u>1 Jan - 30 Nov 1950</u>	<u>Percent of Annual Plan (Quota: 92%)</u>
		<u>Nov 1950</u>	<u>Oct, Nov 1950</u>		
Precious metals (kg)					
Platinum	4	0.187	4.025	16.439	411.0
Gold	49	42.005	45.762	239.281	488.3
Silver	59,600	[illegible]	[illegible]	79,308	133.1

Summary of Production
Under the Two Branches
of the Industry

Electric power, total (million kw-h)	183	16.673	33.272	176.077	96.2
Produced by iron and steel industry	13	1.035	2.296	15.096	116.1
Produced by metal- lurgical industry	170	15.638	30.976	160.981	94.7
Gray castings, total	14,990	2,361	4,727	20,546	137.1
Produced by iron and steel industry	14,300	2,248	4,516	19,483	136.2
Produced by metal- lurgical industry	690	113	211	1,063	134.1
Forged and stamped pieces, total	340	23	54	177	52.1
Produced by iron and steel industry	200	15	35	90	45.0
Produced by metal- lurgical industry	140	8	19	87	62.1
Slag wool, total	1,700	282	577	2,041	150.0
Produced by iron and steel industry	1,000	144	295	1,280	128.0
Produced by metal- lurgical industry	700	138	282	761	108.7

- (1) Zashorlau mine was returned to German ownership by the Soviet Corporations; was not initially included in the plan.
- (2) [Figure is not correct total for items below it.]
- (3) Production not under the Main Department for Metallurgy.

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- (4) Of this, 20,957 tons produced from East Germany's own resources, ore or scrap.
- (5) Of this, 13,849 tons produced from East Germany's own resources, ore or scrap.
- (6) Of this, 8,844 tons produced from East Germany's own resources, ore or scrap.
- (7) With a base of copper, aluminum, bronze, lead, or magnesium.

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